<center>**REMARKS/ARGUMENTS**</center>

In the Office Action mailed September 18, 2008, claims 1-8 are rejected and the specification is objected to. In response, claims 1 and 5 have been amended. Additionally, claims 2 and 6 have been canceled and claims 9-10 has been added. Applicant hereby requests reconsideration of the application in view of amended claims, the new claims, and the below-provided remarks.

Objections to the Specification

The abstract is objected to because the abstract exceeds 150 words in length and the term "ADC" in line 1 of the abstract has not been introduced previously. In response, the abstract has been amended to include less than 150 words. Additionally, the term "ADC" in line 1 of the abstract has been replaced with the term "analog-to-digital converter (ADC)." Applicant respectfully requests that the objection to the abstract be withdrawn.

Claim Rejections under 35 U.S.C. 101

Claims 5-8 are rejected under 35 U.S.C. 101 because the claimed invention is allegedly directed to non-statutory subject matter. In particular, claim 5 is rejected for allegedly claiming a process that is not tied to another statutory class or transform underlying subject matter to a different state or thing. Claims 6-8 are rejected because claims 6-8 depend from claim 5.

In response, claim 5 has been amended to replace the term "in a digital domain" with "using a digital filter." Support for the amendment can be found in Applicant's specification at, for example, claim 1. Applicant respectfully asserts that amended claim 5 claims a process that is tied to another statutory class, a digital filter. Applicant respectfully requests that the rejection to claim 5 under 35 U.S.C. 101 be withdrawn. Because claims 7-8 depend from amended claim 5, Applicant respectfully requests that the rejection to claims 7-8 under 35 U.S.C. 101 be withdrawn as well.

Claim Rejections under 35 U.S.C. 102

      Claims 1-8 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by

Östman (U.S. Pat. No. 6,061,385). Claims 1-8 are also rejected under 35 U.S.C. 102(b)

as allegedly being anticipated by Mathe (U.S. Pat. No. 6,243,430 B1). Applicant

respectfully submits that the pending claims are patentable over Östman and Mathe for

the reasons provided below.

     Independent Claim 1

     Claim 1 has been amended to include the limitation of claim 2. Claim 2 has been

canceled. As amended, claim 1 recites:

> "A wireless communication receiver, comprising:
>   (a) a processing unit that processes received signals and filters the processed
> signals in an analog domain to output filtered analog signals;
>   (b) an analog-to-digital converter (ADC) that converts the filtered analog
> signals into digital signals; and
>   (c) a digital filter that filters the digital signals from the ADC and attenuates
> residual interferers in the digital signals by a predetermined amount, so as to allow
> relaxation of tolerable quantization noise generated by the ADC to a pre-defined
> level to thereby substantially reduce a dynamic range of the ADC, wherein <u>the pre-
> defined level is higher than a level prescribed by the receiver's sensitivity;</u>
>   wherein the ADC has a word length corresponding to the reduced dynamic
> range." (emphasis added)

     Applicant respectfully asserts that Östman does not disclose that "the pre-defined

level is higher than a level prescribed by the receiver's sensitivity," as recited in amended

claim 1. Östman discloses that by applying digital filtering and sampling rate

decimation, a 5-bit analog-to-digital converter can be used to replace an 8-bit analog-to-

digital converter, see Fig. 2 and column 6 line 49 to column 7 line 2. Östman also

discloses that the digital filtering and sampling rate decimation can increase the signal-to-

noise ratio of the receiver of Fig. 2 under a FM mode, see column 7 lines 2-10. However,

Östman does not disclose that the quantization noise generated by the analog-to-digital

converter is relaxed to a level that is higher than the sensitivity of the receiver of Fig. 2.

Because Östman does not disclose all of the limitations of amended claim 1, Applicant

respectfully asserts that claim 1 is not anticipated by Östman.

     Applicant respectfully asserts that Mathe does not disclose that "the pre-defined

level is higher than a level prescribed by the receiver's sensitivity," as recited in amended

claim 1. Mathe discloses that a bandpass filter (512) (see Fig. 5) removes quantization noise from an ADC (240a), see column 8 lines 4-42. However, Mathe does not disclose that the quantization noise generated by the ADC (240a) is relaxed to a level that is higher than the sensitivity of a receiver (200). Because Mathe does not disclose all of the limitations of amended claim 1, Applicant respectfully asserts that claim 1 is not anticipated by Mathe.

Dependent Claims 3-4

Claims 3-4 depend from and incorporate all of the limitations of amended independent claim 1. Applicant respectfully asserts that claims 3-4 are allowable at least based on an allowable amended claim 1. Additionally, claim 3 may be allowable for further reasons respectively, as described below.

Claim 3 recites that "*the total interference of the receiver is kept at a level not greater than an allowable level.*"

Östman discloses that the digital filtering and sampling rate decimation can increase the total signal-to-noise ratio of the receiver of Fig. 2 from 40 dB to 57 dB, see column 7 lines 2-10. However, Östman does not disclose that the total interference of the receiver of Fig. 2 is kept at any particular level.

Mathe discloses that the receiver (200) includes an antenna (212), a duplexer (214), a front end (202), an amplifier (AMP) (216), two bandpass filters (218) and (224), a mixer (220), a local oscillator (LO1) (222), a buffer (BUF) (226) and a demodulator (204), see column 5 lines 62-67 and column 6 lines 1-12. However, Mathe does not disclose that the total interference of the receiver (200), which includes interferences from all of the above components, is kept at any particular level.

Thus, Applicant respectfully asserts that neither Östman nor Mathe discloses all of the limitations of claim 3.

Independent Claim 5

Claim 5 has been amended to include all of the limitations of claim 6 and to correct a grammar mistake. Claim 6 has been canceled. As amended, claim 5 includes a similar limitation to amended claim 1. Because of the similarities between claim 1 and 5,

Applicant respectfully asserts that the above remarks with regard to amended claim 1 apply also to amended claim 5. Accordingly, Applicant respectfully asserts that amended claim 5 is patentable over Östman and Mathe.

Dependent Claims 7-8

Claims 7-8 depend from and incorporate all of the limitations of the independent claim 5. Applicant respectfully asserts that claims 7-8 are allowable at least based on an allowable claim 5.

New Claims 9-10

Claims 9-10 have been added. Support for claim 9 can be found in Applicant's specification at, for example, page 6 lines 5-9. Support for claim 10 can be found in Applicant's specification at, for example, page 3 lines 18-19, page 6 lines 23-24, and page 7 lines 1-8.

Claims 9-10 depend from amended independent claim 1. Applicant respectfully asserts that claims 9-10 are allowable at least based on an allowable claim 1. Additionally, claims 9-10 may be allowable for further reasons respectively, as described below.

Claim 9 recites that "*the digital filter is a digital low-pass filter configured to attenuate out-of-band interferers.*" Östman does not disclose a digital low-pass filter. Mathe also does not disclose a digital low-pass filter. In particular, Mathe discloses that a bandpass filter (512), which provides zero gains at frequencies $f_{ADC/12}$ and $f_{5ADC/12}$ and a maximum gain at frequency $f_{ADC/4}$, see Fig. 5 and column 8 lines 8-15. That is, the bandpass filter (512) is not a low-pass filter.

Claim 10 includes the limitation "*the tolerable quantization noise of the ADC is relaxed to -90.24 in decibels (dB) with reference to one milliwatt (dBm), the dynamic range for the ADC is reduced to 26.24 dB, and the word length of the ADC is between 3 bits to 5 bits.*" Applicant respectfully asserts that neither Östman nor Mathe discloses the above limitation of claim 10.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

/mark a. wilson/

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